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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,464	07/13/2004	Todd Sicklinger		4463

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EXAMINER
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KOVALICK, VINCENT E

ART UNIT	PAPER NUMBER
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2629

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/710,464	<b>Applicant(s)</b> SICKLINGER, TODD	
	<b>Examiner</b> Vincent E. Kovalick	<b>Art Unit</b> 2629	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-18 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

### DETAILED ACTION

1. This Office Action is in response to Applicant's Patent Application Serial No. 10/710,464, with a File Date of July 13, 2004.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rotzoll et al. (USP 7,122,781).

Relative to claim 1, Rotzoll et al. **teaches** a method and sensing device for motion detection in an optical Pointing device such as an optical mouse (col. 4, lines 35-67 and col. 5, lines 1-65); Rotzoll et al. further **teaches** a cursor control device (col. 1, lines 12-14 and Abstract) comprising: a motion detector, which can be pressed against a surface (col. 1, lines 15-21 and col. 4, lines 35-39); an optical sensor array (col. 1, lines 15-21 and col. 4, lines 40-42); and a light source (col. 8, lines 4-11); still further Rotzoll et al. **teaches** wherein the said light source is located remotely from said motion detector (col. 8, lines 14-22 and Fig. 3 item 410).

The difference between the teachings of Rotzoll et al. and that of the instant invention is that the Rotzoll et al. teaching is directed to a motion detector adapted to an optical mouse (title and Abstract), wherein the instant invention extends the mounting of the motion detector to additional mounting means.

It would have been obvious to a person of ordinary skill in the art the time of the invention to provide that the limitations as taught by Rotzoll et al. satisfy the limitations of claims 1, 4 and 9 of the instant invention.

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Regarding claim 4, Rotzoll et al. further **teaches** the said cursor control device comprising a mouse body (col. 1, lines 8-14 and Abstract).

Regarding claim 9, Quick et al. further **teaches** a cursor control device comprising an optical fiber (col. 3, lines 62-67, col. 4, lines 1-8 and Figs. 2 and 4).

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rotzoll et al. as applied to claims 1 in item 3 herein above and further in view of Brewster et al. (Pub. No. US 2003.0020947).

Rotzoll et al. **does not teach** a cursor control device wherein said optical detector array is located remotely from said motion detector.

Brewster et al. **teaches** intelligent printing by a kiosk (pg. 1, para. 0004); Brewster further **teaches** a cursor control device wherein an optical detector array is located remotely from said motion detector (pg. 1, para. 0012 and Fig. 1, items 17 and 19).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Rotzoll et al. the feature as taught by Brewster et al. in order to add flexibility to the number of applications to which the said combination can be adapted.

5 Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rotzoll et al. as applied to claim 1 in item 3 hereinabove, and further in view of Adams (Pub. No. US 2003/0118391).

Relative to claim 3, Rotzoll et al. **does not teach** a cursor control device further comprising a stylus; Adams **teaches** a writing implement (pg. 1, paras. 0001-0005); Adams further **teaches** a cursor control device comprising a stylus (pg. 1, para. 0006)

It would have been obvious to a person of ordinary skill in the art the time of the invention to provide to the device as taught by Rotzoll et al. the feature as taught by Adams in order to put in place a writing implement including detection means for detecting when the writing implement is in close proximity to a particular surface.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rotzoll et al. as applied to claim 1 in item 3 hereinabove, and further in view of Xiong (Pub No. US 2003/0214481).

Relative to claim 7, Rotzoll et al. **does not teach** a cursor control device comprising: means for mounting

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said motion detector on a user's finger.

Xiong **teaches** a finger worn and operated input device and method (pg. 2, paras. 0016-0029);

Xiong further **teaches** a cursor control device further comprising means for mounting said motion detector on a user's finger (pg. 3, para. 0030).

It would have been obvious to a person of ordinary skill in the a at the time of the invention to provide to the device as taught by Rotzoll et al. the feature as taught by Xiong in order to put in place a finger worn device that would facilitate accommodating controlling sensing devices.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rotzoll et al. as applied to claim 1 in item 3 hereinabove, and further in view of Lin (Pub. No. US 2004/0155853); Relative to claim 8, Rotzoll et al. **does not teach** a cursor control device wherein said light source is ambient light.

Lin **teaches** an inverter controller with automatic brightness adjustment circuitry (pg, 1, paras. 0003-0008); Lin further **teaches** a cursor control device wherein said light source is ambient light (pg. 1, para. 0002).

It would have been obvious to a person of ordinary skill in the a at the time of the invention to provide to the device as taught by Rotzoll et al. the feature as taught by Lin in order to accommodate a light source sensitive to ambient light in order to forego having to generate light at specific brightness levels.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rotzoll et al. as applied to claim 1 in item 3 hereinabove, and further in view of Heady (USP 4,922,236) Relative to claim 9, Rotzoll et al. **does not teach** said cursor control device comprising an optical fiber.

Heady **teaches a fiber optical mouse** (col. 3, lines 15-68 and col. 4, lines 1-26); Head further **teaches** said cursor control device comprising an optical fiber (col. 1, lines 5-20; col. 3, lines 27-42 and Abstract).

It would have been obvious to a person of ordinary skill in the a at the time of the invention to provide to the device as taught by Rotzoll et al. the feature as taught by Heady in order to adapt to a cursor control device, optical fiber technology the would facilitate producing a motion cursor control device in a

configuration other than a mouse configuration.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rozoll et al. in view of Heady as applied to claim 9 in item 8 hereinabove, and further in view of Koo (Pub. No. US 2004/0239629);

Regarding claim 10, Rotzoll et al. in view of Heady **does not teach** the said cursor control device comprising a plurality of motion detectors.

Koo **teaches** a modular scroll wheel (pg.1/2, paras. 0008-0010); Koo further **teaches** a cursor control device further comprising a plurality of motion detectors (pg. 1, para. 0002)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Rotzoll et al. in view of Heady the feature as taught by Koo in order to provide the means to convert two-dimensional movement of the mouse across the surface into horizontal and vertical motion of a cursor pointer (pg. 1, para. 0002).

10. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rotzoll et al. in view of Heady as applied to claim 9 in item 8 hereinabove, and further in view of Kramer et al. (USP 6,701,296).

Regarding claim 11, Rotzoll et al. in view of Heady **does not teach** a cursor control device comprising a glove having a plurality of finger coverings.

Kramer et al. **teaches** strain-sensing goniometers systems (col. 2, lines 6-23); Kramer et al. further **teaches** a cursor control device comprising a glove having a plurality of finger coverings (col. 8, lines 57-65 and col. 23, lines 22-32).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Rotzoll et al. in view of Heady the feature as taught by Kramer in order to put in place a finger worn device that would facilitate accommodating controlling of sensing devices.

Relative to claim 12, Kramer further **teaches** a cursor control device further comprising a plurality of switches mounted in said finger coverings (col. 8, lines 57-65 and col. 23, lines 22-32).

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11. Claims 13-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushita (USP 4,113,353).

Relative to claims 13, 15 and 17 Matsushita **teaches** an information processing optical device (col. 2, lines 3-68); Matsushita further **teaches** a method of determining a position associated with an object placed over a viewing surface of a monitor comprising the step of: detecting a time ordered signal, which is traversing the viewing surface of the monitor; and determining the position of said object based upon when said time ordered signal was detected (col. 9, lines 57-68; col. 10, lines 1-6; col. 12, lines 62-67; col. 13, lines 1-30 and Fig. 11a).

The difference between the teachings of the instant invention and that of the prior art Matsushita is that wherein the instant invention teaches the results of determining a position associated with the placement of an object over a viewing surface, Matsushita puts emphasis on the information processing of the optical device.

It would have been obvious to a person of ordinary skill in the art at the time of the invention that the teachings of Matsushita satisfy the limitations of claims 13 of the instant invention.

Regarding claim 14, Matsushita further **teaches** a method of determining a position associated with an object placed over a viewing surface of a monitor, further comprising the step of positioning a pointer in the vicinity of said position (col. 12, line 59-68 and col. 13, lines 1-2).

It being understood that the light spot as taught by Matsushita would have to be initiated by a pointing device.

Regarding claim 15 Matsushita further **teaches** the method step of inserting a time ordered signal on to a viewing surface of a monitor (col. 9, lines 34-65).

12. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pai et al. (USP 5,668,571) taken with Rotzoll et al.

Relative to claims 16 Pai et al. **teaches** a method and apparatus to generating cursor (col. 2, lines 66-67 and col. 3, lines 1-54); Pai et al. further **teaches** a device for determining the position of an object on the viewing surface of a monitor comprising: a horizontal timer; and a vertical timer (col. 5, lines 18-45).

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Pai et al. **does not teach** the said device comprising an optical sensor.

Rotzoll et al. **teaches** an optical sensor ( col. 4, linea 40-42).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Pai et al. the feature as taught by Rotzoll et al. in order to capture the signals necessary to determine the position of the object on the viewing surface of a monitor.

13. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushita as applied to claim 17 in item 11 hereinabove, and further in view of Benjamin (USP 3,949,391).

Relative to claims 18, Matsushita **does not teach** means for detecting motion across a surface.

Benjamin **teaches** plasma panel light pen tracking using adaptive tracking scan (col. 2, lines 51-68 and col. 2, lines 1-21); Benjamin further **teaches** means for detecting motion across a surface (col. 1, lines 12-18 and Fig. 2).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Pai et al. the feature as taught by Benjamin et al. in order to provide the means to continuously track the motion of a device across a viewing surface.

#### ***Allowable Subject Matter***

14. Claims 5-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 5, the major difference between the teachings of the prior art of record (Van Brocklin et al. (Pub. No. US 2003/0117370); Taylor (USP 4,051,397) and Kramer (USP 6,701,296) and that of the instant invention is that said prior art of record **does not teach** The cursor control device wherein a motion detector is mounted on said stylus; said stylus is mounted in said mouse body; and said stylus is extendable from said mouse body.



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**Conclusion**

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No. 6,847,350 Van Brocklin et al.

U. S. Patent No. 6,791,531 Johnston et al.

**To Respond**

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent E. Kovalick whose telephone number is 571-272-7669. The examiner can normally be reached on Monday-Thursday 7:30- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Vincent E. Kovalick  
May 14, 2007



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